

### **R E M A R K S**

Reconsideration of this application, as amended, is respectfully requested.

### **THE CLAIMS**

Claim 1 has been amended to more positively recite "cast steel legs" rather than indirectly reciting that the legs are "formed from cast steel" as formerly recited in claim 1.

In addition, claim 1 has been amended to incorporate some of the subject matter of claim 2.

No new matter has been added and no new issues with respect to patentability have been raised. Accordingly, it is respectfully requested that the amendments to claim 1 be approved and entered under 37 CFR 1.116.

### **THE PRIOR ART REJECTION**

Claims 1-8 were all again rejected under 35 USC 102 and/or 35 USC 103 as being anticipated by or rendered obvious in view of one or more of USP 4,391,341 ("Taghon"), JP 11-093209 ("Kotani"), JP 2001-106128 ("Yamada"), JP 9-209402 ("Kawamura et al"), and USP 4,069,637 ("Braithwaite"). These rejections, however, are respectfully traversed.

The Examiner contends in item 7 at the top of page 5 of the Final Office Action that the plates of steel of the references

were at one time cast and therefore disclose the subject matter of the claimed present invention. Indeed, rolled sheets of steel were at one time cast ingots or were formed from continuous castings; see for example, Figure 13.1 on page 348 of the attached reference material<sup>1</sup>.

It is respectfully pointed out, however, that after being rolled out from ingots, sheet steel has substantially different mechanical properties from the cast ingots from which it was rolled; see for example, pages 354, 355, 357, and 436 of the attached reference material and specifically Figure 13.6 on page 355 and Table 16.2 on page 436.

According to the claimed present invention, a crawler frame for a construction machine is provided which comprises a center frame, and right and left track, wherein the center frame comprises a central frame section and cast steel legs for connecting the central frame section to the track frames. And it is respectfully submitted that the cast steel legs are a structural feature having specific mechanical properties, and that none of the cited references disclose, teach or suggest this feature of the claimed present invention.

In addition, according to the present invention as recited in amended independent claim 1, top faces of the cast steel legs

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<sup>1</sup> Kalpakjian, Serope; Schmid, Steven R. Manufacturing Engineering and Technology. 5<sup>th</sup> Ed. Pearson Education, New Jersey: 2006.

are convex in cross-section, and the top faces face upward away from a surface on which the construction machine is supported. With this structure, if mud is flung onto the cast steel legs of the center frame, the mud can easily drop to the ground without adhering or can easily be shaken off due to vibrations that occur during movement of the construction machine.

Taghon discloses at column 3, lines 31 and 32 that "arms" 41 are formed by bending a sheet of metal and reinforcing the bent sheet, as shown in Fig. 4 of Taghon. And it is respectfully submitted that one of ordinary skill in the art would have understood the disclosure of a sheet of metal in Taghon to mean a rolled sheet, not a cast sheet. In addition, it is respectfully pointed out that Taghon clearly discloses that the upper plate 43 of the legs thereof is not convex.

Kotani shows in Figs. 1 and 4 thereof that the central frame and legs are made from plates (side walls 33, 34 and upper and lower plates 35 and 36, as described in the abstract). And it is respectfully submitted that one of ordinary skill in the art would have understood the disclosure of a sheet of metal in Kotani to mean a rolled sheet, not a cast sheet. Kotani, moreover, also does not disclose center frame legs with convex top faces in the manner of the present invention.

Yamada shows a structure in Fig. 1 thereof comprising shaped plates rather than cast steel. And it is respectfully submitted

that one of ordinary skill in the art would have understood the disclosure of a sheet of metal in Yamada to mean a rolled sheet, not a cast sheet. In addition, Yamada clearly discloses legs with a square cross-section, not center frame legs with convex top faces in the manner of the present invention.

Kawamura et al, moreover, shows in Figs. 4, 6, 14 and 17 thereof sheets of metal that are used to make the central frame portion and legs. And it is respectfully submitted that one of ordinary skill in the art would have understood the disclosure of a sheet of metal in Kawamura et al to mean a rolled sheet, not a cast sheet. In addition, it is respectfully submitted that Kawamura et al does not disclose center frame legs with convex top faces as recited in amended independent claim 1.

It is respectfully submitted that the rolled steel sheets of the cited references do not correspond to the cast steel legs of the claimed present invention, and it is respectfully submitted that the cited references do not disclose center frame legs whose top faces (which face upward away from the ground) are convex, in the manner of the claimed present invention.

It is respectfully submitted, moreover, that the legs formed by a bent sheet of metal in the manner of the cited references are disadvantageous for several reasons. In particular, forming legs by bending a sheet of rolled metal involves a complicated process in which the number of stages is large. In addition,

when the legs should be thick near the track frame, which is exposed to more stress than the center frame portion of the vehicle, it is necessary to form the legs from a thicker plate of metal, even though there is no need for the greater thickness in other portions formed by the same plate. Thus, material is wasted and the weight of the vehicle is increased. Still further, when forming the legs from a sheet of metal, it is difficult to make the ends of the legs gradually larger, in accordance with a joint flange section provided at the track frame, so as to reduce stress on the track frame (which receives a large load).

In view of the foregoing, it is respectfully submitted that the claimed present invention clearly patentably distinguishes over all of the cited references, taken singly or in any combination, under 35 USC 102 and 35 USC 103.

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Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

Application No. 10/719,284  
Response to Office Action

Customer No. 01933

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned for prompt action.

Respectfully submitted,

/Douglas Holtz/

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